

NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD

LAND SMOOTHING

(Ac.)

CODE 466

DEFINITION

Removing irregularities on the land surface.

- The land shall be protected from erosion due to storm runoff

PURPOSE

To improve surface drainage, provide for more uniform cultivation, and improve equipment operation and efficiency.

CRITERIA

The extent of rough grading required and tolerances of the finished smoothing job shall be in keeping with the requirements of the planned cropping system.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on areas where depressions, mounds, old terraces, turn-rows, and other surface irregularities interfere with the application of needed soil and water conservation and management practices.

It is limited to areas having adequate soil depth or where topsoil can be salvaged and replaced.

This practice does not apply to the regular maintenance on irrigated land or on land that has been modified using Precision Land Forming (462) or Irrigation Land Leveling (464).

The smoothing of agricultural lands to improve surface drainage must be for the purpose of proper land use under the following conditions:

- The soils to be smoothed shall be of such capability as to provide good permanent cropland after drainage
- The land to be smoothed must have an outlet, based on the degree of drainage required by the crops to be grown, to adequately provide for the removal of drainage water
- A collection ditch system must be located or planned in accordance with Surface Drainage, Field Ditch (607) when necessary for proper functioning of the system

On depressional land, only sufficient soil shall be moved to fill in minor depressions varying in depth up to approximately 0.5 foot and to remove small ridges and humps.

Adequate soil investigations shall be made to determine the depth of topsoil. If there is infertile subsoil, excavate 6 inches and replace with topsoil.

Irregularities shall be smoothed to the degree required for the planned use.

The land to be smoothed shall be cleared of vegetative matter and trash.

CONSIDERATIONS

When planning this practice, the following items should be considered where applicable:

- Where possible, the ground surface should be plowed or disked prior to smoothing
- Effects on the water budget, especially on volumes and rates of runoff, infiltration, and evaporation
- Potential changes in plant growth and transpiration because of changes in the volume of soil water
- Effect on erosion and the movement of sediment and soluble substances attached to sediment carried by runoff

- Effects on the use and management of nutrients and pesticides on surface and ground water quality
- Effects on downstream water quality
- Effects on wetland hydrology and/or wetland wildlife habitat

PLANS AND SPECIFICATIONS

Plans and specifications for land smoothing shall be in keeping with this standard and shall describe the requirement for applying the practice to achieve its intended purpose.

The following list of Construction Specifications is intended as a guide to selecting the appropriate specifications for each specific project. The list includes most, but may not contain all, of the specifications that are needed for a specific project:

IA-1	Site Preparation
IA-3	Structure Removal
IA-5	Pollution Control
IA-11	Removal of Water
IA-21	Excavation
IA-23	Earthfill
IA-26	Topsoiling

OPERATION AND MAINTENANCE

An operation and maintenance (O&M) plan shall be prepared for each site. Such actions shall include performing maintenance when needed to insure that surface irregularities are maintained at the degree of smoothness required.